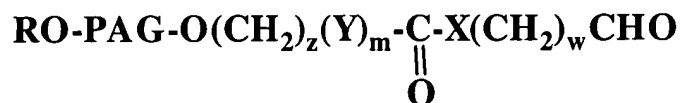


AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions of claims in the application.

LISTING OF CLAIMS:

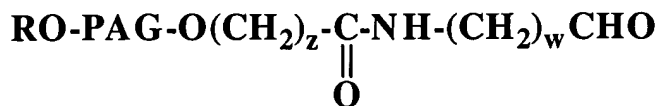
1. (Original) An aldehyde having the formula:



IA

wherein R is hydrogen or lower alkyl, X and Y are individually selected from -O - or - NH- with the proviso that X is NH when m is 1 and Y is -O-, PAG is a divalent residue of polyalkylene glycol resulting from removal of the terminal hydroxy groups and having a molecular weight of from about 1,000 to about 100,000 Daltons, z is an integer of from 2 to 4, m is an integer of from 0 to 1, and w is an integer of from 2 to 8, wherein the aldehyde group is free or protected with a hydrolyzable aldehyde protecting group, or a hydrate thereof.

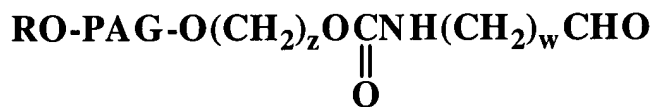
2. (Original) The aldehyde of claim 1 wherein said residue is formed from polyethylene glycol.
3. (Original) The aldehyde of claim 2 wherein the residue has a molecular weight of 5,000 to 50,000 Daltons.
4. (Original) The aldehyde of claim 1 wherein said aldehyde has a formula:



I-Ai

wherein R, PAG, and w are as above, and z is an integer of
from 1 to 4

5. (Original) The aldehyde of claim 4 wherein said divalent residue is polyethylene glycol.
6. (Original) The aldehyde of claim 5 wherein the residue has a molecular weight of 5,000 to 50,000 Daltons.
7. (Original) The aldehyde of claim 6 wherein R is methyl and the molecular weight of the residue is about 10,000 Daltons.
8. (Original) The aldehyde of claim 6 wherein R is methyl, and the molecular weight of the residue is 20,000 Daltons.
9. (Original) The aldehyde of claim 1 wherein said aldehyde has the formula:



I-Aii.

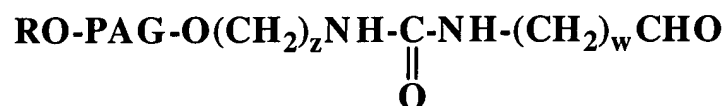
wherein R, PAG, and w are as above, and z is an integer of
from 2 to 4

10. (Original) The aldehyde of claim 9 wherein said divalent residue is formed from polyethylene glycol.

11. (Original) The aldehyde of claim 10 wherein the residue has a molecular weight of 5,000 to 50,000 Daltons.

12. (Original) The aldehyde of claim 11 wherein R is methyl and said residue has a molecular weight of 10,000 Daltons.

13. (Original) The aldehyde of claim 1 having the formula:



I-Aiii

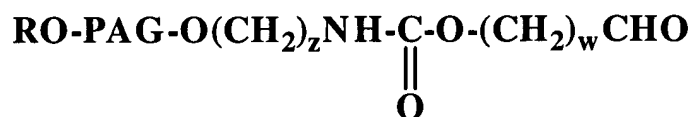
wherein R, PAG, and w are as above, and z is an integer of from 2 to 4.

14. (Original) The aldehyde of claim 13 wherein said divalent residue is polyethylene glycol.

15. (Original) The aldehyde of claim 14 wherein the residue has a molecular weight of 5,000 to 50,000 Daltons.

16. (Original) The aldehyde of claim 15 wherein R is methyl and the molecular weight of the residue is 10,000 Daltons.

17. (Original) The aldehyde of claim 1 having the formula:



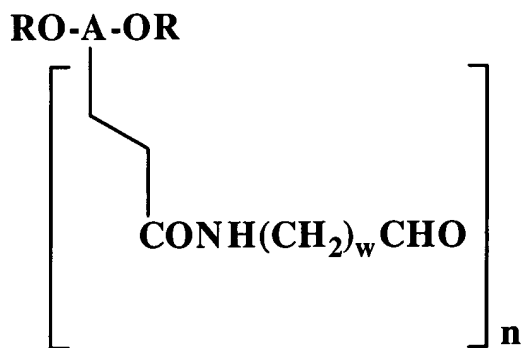
wherein R, PAG, and w are as above, and z is an integer of from 2

to 4.

I-Aiv

18. (Original) The aldehyde of claim 17 wherein said divalent residue is formed from polyethylene glycol.

19. (Original) The compound of claim 18 wherein the residue has a molecular weight of 5,000 to 10,000 Daltons.
20. (Original) The aldehyde of claim 19 wherein R is methyl and the molecular weight of the residue is 10,000 Daltons.
21. (Original) An aldehyde of the formula:



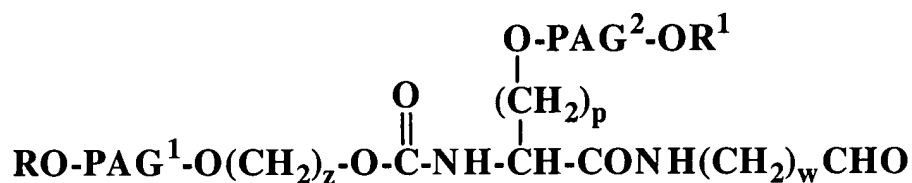
IB

wherein R is hydroxyl or lower alkyl, A is a polyethylene glycol residue with its two terminal hydroxy groups being removed having a molecular weight of from 1,000 to 100,000 Daltons and having a valence of from 1 to 5, n is an integer of from 1 to 5 which integer is the same as the valence of A, and w is an integer from 2 to 8.

22. (Original) The aldehyde of claim 21 wherein A is a residue having a molecular weight of from 5,000 to 50,000 Daltons.
23. (Original) The aldehyde of claim 22 where n is 1.
24. (Original) The aldehyde of claim 23 where the R is methyl and A has a molecular weight of about 20,000 Daltons.

25. (Original) The aldehyde of claim 23 wherein R is methyl and A has a molecular weight of 10,000 Daltons.

26. (Original) An aldehyde of the formula:



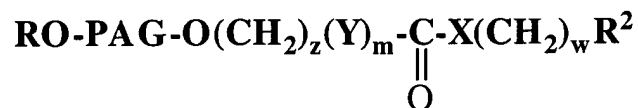
IC

wherein PAG¹ and PAG² are independently divalent residues of poly lower alkylene glycol resulting from removal of the two terminal hydroxy groups with the PAG¹ and PAG² residues having a combined molecular weight of from 1,000 to 100,000 Daltons, R and R¹ are individually lower alkyl or hydrogen, z is an integer of from 2 to 4, p is an integer of from 2 to 5, and w is an integer of from 2 to 8, wherein the aldehyde group is free or protected with a hydrolyzable aldehyde protecting group, or a hydrate thereof.

27. (Original) The aldehyde of claim 26 wherein said R is methyl, PAG¹ and PAG² are formed from polyethylene glycol residues.

28. (Original) The aldehyde of claim 27 wherein R is methyl and PAG¹ and PAG² both have a molecular weight of 5,000 to 50,000 Daltons.

29. (Original) A compound of the formula:



wherein R is hydrogen or lower alkyl, R² is -

CH(OH)CH(OH)R₁₃ wherein R₁₃ is hydrogen, alkyl, or

phenyl, X and Y are individually selected from -O- or -NH-

with the proviso that X is NH when m is 1 and Y is -O-, PAG

is a divalent residue of polyalkylene glycol resulting from

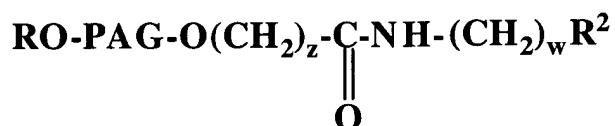
removal of the terminal hydroxy groups and having a

molecular weight of from about 1,000 to about 100,000

Daltons, z is an integer of from 2 to 4, m is an integer of from

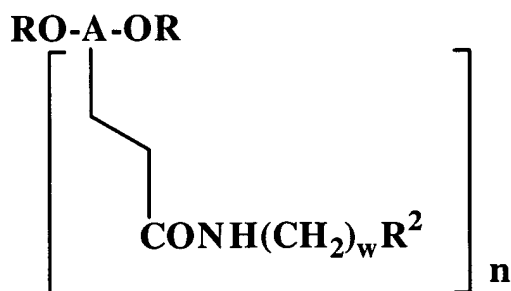
0 to 1, and w is an integer of from 2 to 8.

30. (Original) The conjugate of claim 29 where said conjugate has the formula:



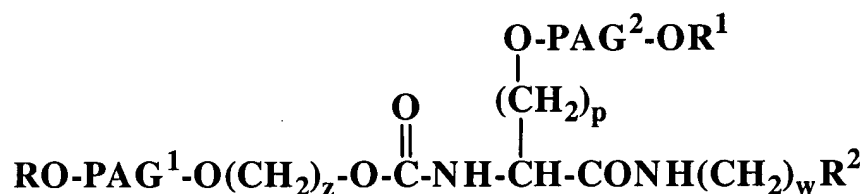
wherein PAG, R, R², z and w are as above.

31. (Original) A compound of the formula:



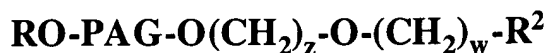
wherein R is hydrogen or lower alkyl, R² is -
 CH(OH)CH(OH)R₁₃ wherein R₁₃ is hydrogen, alkyl, or
 phenyl, A is a polyethylene glycol residue with its two
 terminal hydroxy groups being removed having a molecular
 weight of from 1,000 to 100,000 Daltons and having a
 valence of from 1 to 5, n is an integer of from 1 to 5 which
 integer is the same as the valence of A, and w is as integer of
 from 2 to 8.

32. (Original) A compound of the formula:



wherein PAG¹ and PAG² are independently divalent residues
 of poly lower alkylene glycol resulting from removal of the
 two terminal hydroxy groups with the PAG¹ and PAG²
 residues having a combined molecular weight of from 1,000
 to 100,000 Daltons, R and R¹ are individually lower alkyl or
 hydrogen, R² is CH(OH)CH(OH)R₁₃ wherein R₁₃ is
 hydrogen, alkyl, or phenyl, w is an integer from 2 to 8, p is an
 integer of from 2 to 5, and z is an integer of from 2 to 4.

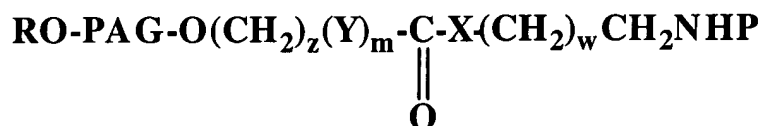
33. (Original) A compound of the formula:



wherein R is lower alkyl or hydrogen, R² is -

CH(OH)CH(OH)R₁₃ wherein R₁₃ is hydrogen, alkyl, or phenyl, PAG is the divalent residue of polyethylene glycol resulting from removal of the two terminal hydroxy groups having a molecular weight of from 1,000 to 100,000 Daltons, z is a integer of from 2 to 4 and w is an integer of from 2 to 8.

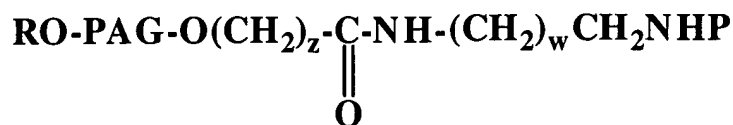
34. (Original) A conjugate of the formula:



III-A

wherein P is the residue of a protein with its amino group removed, R is hydrogen or lower alkyl, X and Y are individually selected from -O- or -NH with the proviso that X is NH when Y is -O-, PAG is a divalent residue of polyalkylene glycol resulting from removal of the terminal hydroxy groups, having a molecular weight of from 1,000 to 100,000 Daltons, z is an integer of from 2 to 4, m is an integer of from 0 to 1, and w is an integer of from 2 to 8.

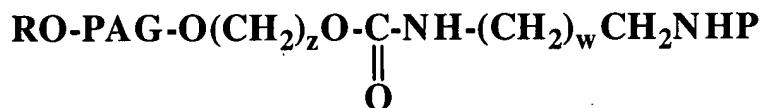
35. (Original) The conjugate of claim 34 where said conjugate has the formula:



III-E

wherein P, R, PAG, z and w are as above.

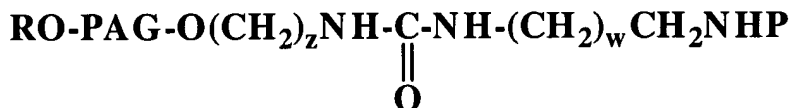
36. (Original) The conjugate of claim 35 wherein PAG is formed from polyethylene glycol having a molecular weight of from 5,000 to 50,000.
37. (Original) The conjugate of claim 36 where said P is G-CSF, EPO, IFN- α , IFN- β or Hemoglobin.
38. (Original) The conjugate of claim 34 wherein said conjugate has the formula:



III-F

wherein P, R, PAG, and w are as above, and z is an integer of from 2 to 4.

39. (Original) The conjugate of claim 38 wherein PAG is polyethylene glycol having a molecular weight of from 5,000 to 50,000.
40. (Original) The conjugate of claim 39 where said P is G-CSF, EPO, IFN- α , IFN- β or Hemoglobin.
41. (Original) The conjugate of claim 34 wherein said conjugate has the formula:



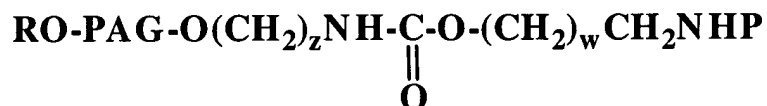
III-G

wherein P, R, PAG, and w are as above, and z is an integer of from 2 to 4.

42. (Original) The conjugate of claim 41 wherein PAG is polyethylene glycol having a molecular weight of from 5,000 to 50,000.

43. (Original) The conjugate of claim 42 where said P is G-CSF, EPO, IFN- α , IFN- β or Hemoglobin.

44. (Original) The conjugate of claim 34 wherein said conjugate has the formula:



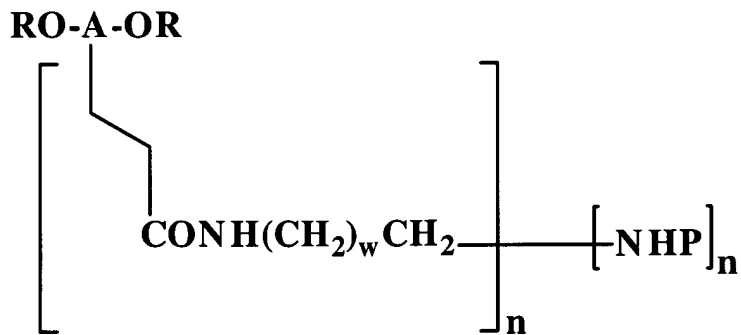
III-H

wherein P, R, PAG, and w are as above, and z is an integer of from 2 to 4.

45. (Original) The conjugate of claim 44 wherein PAG is polyethylene glycol having a molecular weight of from 5,000 to 50,000 Daltons.

46. (Original) The conjugate of claim 45 where said P is G-CSF, EPO, IFN- α , IFN- β or hemoglobin.

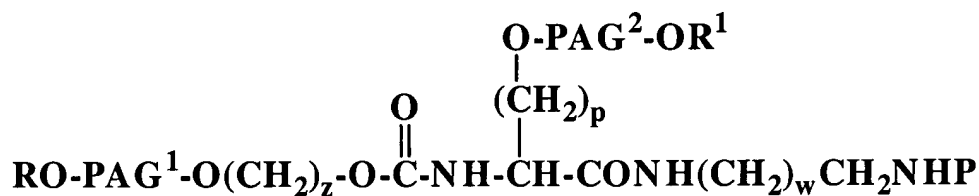
47. (Original) A conjugate of the formula:



III-B

wherein P is a residue of a protein with its amino group removed, R is hydrogen or lower alkyl, A is a polyethylene glycol residue with its two terminal hydroxy groups being removed having a molecular weight of from 1,000 to 100,000 Daltons and having a valence of from 1 to 5, n is an integer of from 1 to 5 which integer is the same as the valence of A, and which integer is the same as the number of proteins P, w is as above.

48. (Original) The conjugate of claim 47 where n is 1.
49. (Original) The conjugate of claim 47 where A is polyethylene glycol residue.
50. (Original) The conjugate of claim 49 wherein PAG is polyethylene glycol having a molecular weight of from 5 to 50,000 Daltons.
51. (Original) A conjugate with the formula:



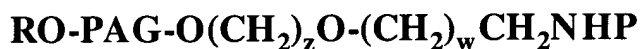
III-C

wherein P is a residue of a protein with its amino group being removed, PAG¹ and PAG² are independently divalent residues of poly lower alkylene glycol resulting from removal of the two terminal hydroxy groups and with the PAG¹ and

PAG² residues having a combined molecular weight of from 1,000 to 100,000 Daltons, R and R¹ are individually lower alkyl or hydrogen, w is an integer of from 2 to 8, p is an integer of from 2 to 5, and z is an integer of from 2 to 4.

52. (Original) The conjugate of claim 51 where PAG¹ and PAG² are each polyethylene glycol having a combined molecular weight from 5,000 to 50,000.

53. (Original) A conjugate of the formula:



III-D

wherein P is a residue of a protein with an amino group being removed, PAG is a divalent residue of a poly lower alkylene glycol resulting from removal of the two terminal hydroxy groups having a molecular weight of from 1,000 to 100,000 Daltons, R is lower alkyl or hydrogen, w is an integer from 2 to 8 and z is an integer from 2 to 4.

54. (Original) The conjugate of claim 53 where PAG is a polyethylene glycol residue.

55. (Original) The conjugate of claim 54 where PAG has a molecular weight of from 5,000 to 50,000 Daltons.

Claims 56-59. (Canceled)

Claims 60-63. (Previously Canceled)

64. (Original) The conjugate of the formula:



I-Ai

wherein R is hydrogen or lower alkyl, PAG is a divalent residue of polyalkylene glycol resulting from removal of the terminal hydroxy groups and having a molecular weight of from 1,000 to 100,000 Daltons, and w is an integer of from 2 to 8.

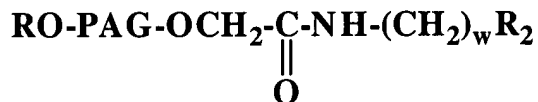
65. (Original) The aldehyde of claim 64 wherein said divalent residue is polyethylene glycol.

66. (Original) The aldehyde of claim 65 wherein the residue has a molecular weight of 5,000 to 50,000 Daltons.

67. (Original) The aldehyde of claim 66 wherein R is methyl, and the molecular weight of the residue is about 10,000 Daltons.

68. (Original) The aldehyde of claim 67 wherein R is methyl, and the molecular weight of the residue is about 20,000 Daltons.

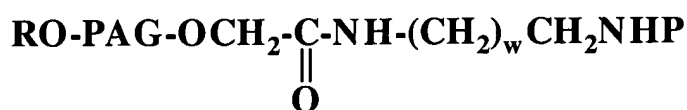
69. (Original) The conjugate of the formula:



wherein PAG is a divalent residue of polyalkylene glycol resulting from removal of the terminal hydroxy groups and having a molecular weight of from 1,000 to 100,000 Daltons,

R is lower alkyl or hydrogen, R² is CH(OH)CH(OH)R₁₃
 wherein R₁₃ is hydrogen, alkyl, or phenyl, and w is an integer
 of from 2 to 8 and are as above.

70. (Original) The conjugate of the formula:



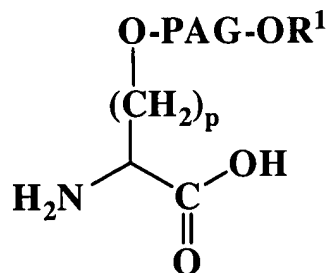
III-E

wherein P is a residue of a protein with its amino group being
 removed, R is hydrogen or lower alkyl, PAG is a divalent
 residue of polyalkylene glycol resulting from removal of the
 terminal hydroxy groups, having a combined molecular
 weight of from 1,000 to 100,000 Daltons, w is an integer of
 from 2 to 8 and are as above.

71. (Original) The conjugate of claim 70 wherein PAG is formed from polyethylene glycol having a molecular weight of from 5,000 to 50,000

72. (Original) The conjugate of claim 70 where P is G-CSF, EPO, IFN- α , IFN- β or Hemoglobin.

73. (Original) A compound of the formula:



wherein R¹ is lower alkyl, or hydrogen, PAG is a divalent residue of polyalkylene glycol resulting from removal of the terminal hydroxy groups, having a combined molecular weight of from 1,000 to 100,000 Daltons, and p is an integer of from 2 to 5.

74. (Original) The conjugate of claim 73 wherein PAG is formed from polyethylene glycol having a molecular weight of from 5,000 to 50,000.